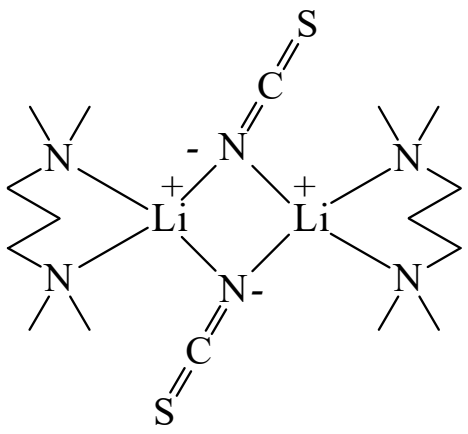
>>**Entry Name: Lithium thiocyanate**
Synonym(s): Thiocyanic acid lithium salt, 8Cl



Tetramethylpropylenediamine complex, dimeric

CAS Registry Number: 556-65-0
Related CAS Registry Numbers(s): 123333-85-7

Molecular Formula: CLiNS
Molecular Weight: 65.025
Accurate Mass: 64.991147
Percentage Composition: C 18.47%; Li 10.67%; N 21.54%; S 49.31%
Source/Synthesis: Prepared by reaction of $Ba(SCN)_2$ aq. with Li_2SO_4 aq., or by slow neutralisation of Li_2CO_3 with thiocyanic acid
Use/Importance: Component of absorbent-refrigerants used in solar refrigeration
Physical Description: Deliquescent white cryst.
Solubility: V. sol. H_2O

Fluka: 62611

>>**Derivative:** Tetramethylpropylenediamine complex (1:1)
Synonym(s): (*N*,*N*,*N*',*N*'-Tetramethyl-1,3-propanediamine-*N*,*N*')(thiocyanato-*N*)lithium, 13Cl

CAS Registry Number: 148631-42-9
Molecular Formula: $C_8H_{18}LiN_3S$
Molecular Weight: 195.257
Accurate Mass: 195.138145
Percentage Composition: C 49.21%; H 9.29%; Li 3.55%; N 21.52%; S 16.42%
Source/Synthesis: Prepd. by reaction of BuLi with a suspension of solid $[NH_4]NCS$ in toluene containing $Me_2N(CH_2)_3NMe_2$
Physical Description: Colourless cubic cryst. (toluene/hexanes)
Melting Point: Mp 166-169°
Other Data: Dimeric struct. based on a Li_2N_2 ring with asymmetric μ_2-$NCS^{(-)}$ bridges. Tetrahedral coord. of Li atom completed by chelating diamine ligand

References:

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